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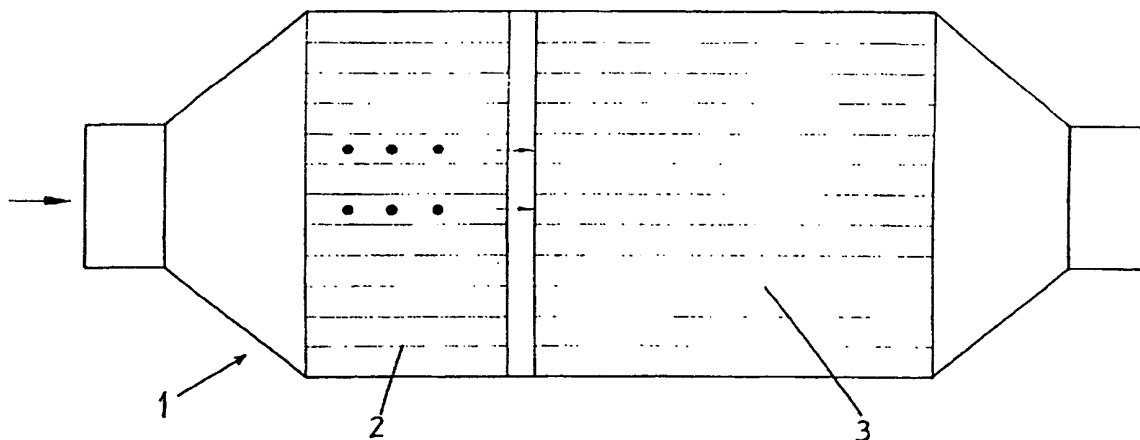
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(54) **Emission control**

(57) An emission control system especially for light duty diesel engines has a first catalyst, 2, positioned upstream of a second catalyst, 3. The first catalyst con-

verts NO to NO<sub>2</sub> and the second catalyst oxidises HC, NO and VOF. The tendency of the second catalyst to collect soot particles is reduced by combustion of the soot particles by NO<sub>2</sub> from the first catalyst.



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## EUROPEAN SEARCH REPORT

Application Number  
EP 97 30 7691

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
D,A	US 4 902 487 A (COOPER BARRY J ET AL) 20 February 1990 * column 1, line 44 - line 56 *	1,2	B01D53/94 F01N3/20 F01N3/02
A	DE 33 37 903 A (REIF GERHARD;BAUM WERNER) 9 May 1985 * figure 3 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B01D F01N
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 April 1999	Examiner Faria, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 97 30 7691

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The members are as contained in the European Patent Office EDP file on  
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29-04-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4902487      A	20-02-1990	AT      132940 T	15-01-1996
		DE      68925382 D	22-02-1996
		DE      68925382 T	15-05-1996
		DK      233389 A	14-11-1989
		EP      0341832 A	15-11-1989
		ES      2081301 T	01-03-1996
		GR      3018800 T	30-04-1996
		IE      71167 B	29-01-1997
		JP      1318715 A	25-12-1989
-----			
DE 3337903      A	09-05-1985	NONE	
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